

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Theil et al. (US 5,837,091, hereinafter "Theil").

In regards to claim 13, Theil discloses the thermal adhesion of at least two acrylic plastic parts (col. 1 lines 7-8). Theil discloses that the polymethacrylate plastic parts comprise of polymerizates of methyl methacrylate, which can be comprised of up to 50 wt.-% of other monomers which can be copolymerized with methyl methacrylate. The proportion of methyl methacrylate be 80 to 100 wt.-% (col. 3 lines 32-36). The polymethacrylate plastics with the composition disclosed by Theil can be thermoplastically or thermoelastically formed (col. 3 lines 44-45). The embossing depth is from 0.2 mm (200  $\mu$ m) (col. 5 line 4). Theil discloses that the average molecular weights MW are between  $3 \times 10^4$  and approximately  $5 \times 10^6$  (col. 3 lines 50-51).

In regards to claim 14, Theil discloses that the invention relates to the thermal adhesion of at least two acrylic plastic parts (col. 1 lines 6-7). Theil discloses that the polymethacrylate plastic parts are sheets, which have engraving or embossings (col. 2 lines 54-56), thus have a microstructured surface. The plastic parts comprise of the composition as disclosed. According to applicant the backing layer is composed of a

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polymethacrylate moulding composition which comprised from 80 to 100% by weight of free-radical-polymerized methyl methacrylate units and of from 0 to 20% by weight of other co-monomers capable of free-radical polymerization (pg. 5 lines 31-37). Applicant discloses that the structure layer is composed of the same materials as the backing layer (pg. 7 lines 1-11). Thus, the Examiner interprets the polymethacrylate plastic parts disclosed by Theil would be considered a backing layer and/or a structure layer.

In regards to claim 15, Theil discloses that flat objects can be embedded between the adhesion sides of the sheets, such as thermoplastic elastomers and narrow strips of plastic (col. 5 lines 23-37). These flat objects are considered a backing layer where the polymethacrylate plastic sheets are the structure layers.

In regards to claim 16, Theil discloses that the polymethacrylate plastic parts are sheets or films (col. 2 lines 42-43). Theil discloses that the polymethacrylate plastic parts are sheets, which have engraving or embossings (col. 2 lines 54-56).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Theil et al. (US 5,837,091, hereinafter "Theil").

In regards to claim 19, Theil discloses the embossed plastic sheets as described in previous paragraphs. Theil is silent with regards to the ratio of height:width of the embossings. It would be obvious to one of ordinary skill in the art at the time of the invention to use a ratio of height:width of the embossings of the instant applicant to form a part that results in a very plastic effect of the laminate system (Theil col. 5 lines 47-51). Therefore, the laminate will have less stress crack corrosion which will aid in the production of articles in a series (Theil col. 1 lines 46-51).

***Response to Amendment***

5. Applicant's arguments filed 12/17/2007 have been fully considered but they are not persuasive.
6. Applicant amends the claims to include the limitations set forth by claim 1 but also adds that the dimensions of geometries of the microstructured surface are up to 200  $\mu\text{m}$ . The limitations set forth in amended claim 13 have been previously presented in the non-final rejection. The applicant states on the record that the embossing depth is of 200  $\mu\text{m}$  of the Theil reference. Applicant argues that Theil did not appreciate that it was necessary to have a low molecular weight with the embossing depth. The examiner is not to determine whether Theil had an appreciation for the combination of the low molecular weight with the embossing depth but rather to determine whether the instant applicants claims are anticipated by the prior art. Theil discloses that the embossing depth in the examples can be of 200  $\mu\text{m}$  (examples 1 and 2). The claim language of the instant applicant does not reflect a relationship between the width of the

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embossings and the molecular weight. Thus, the examiner only considers what the claim language reflects, which is an embossing depth of 200  $\mu\text{m}$ , which Theil explicitly discloses. The arguments are not found persuasive, thus the rejection of claims 13-16 is maintained.

7. In regards to claim 15, the objection is removed due to the amendment of the claim.

8. In regards to claim 18, it was withdrawn from further consideration due to the restriction requirement set forth in the previous office action, which applicant elected claims 13-16.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on Monday-Friday 7-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner  
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